REMARKS

Claims 15-16 and 18-24 are pending in the present application.

I. The First Rejection of Claims 15-16, 18-24 Under the Enablement Standard of § 112, 1st Paragraph Is Traversed.

The Office Action correctly noted that the present specification discloses the use of amniotic fluid as the source of the body fluid used in the method of the invention. However, the Office Action is not correct to suggest that the present invention generates only patient profiles. The present specification is, in fact, an exemplification of the diagnosis of chromosomal abnormalities in a fetus. The reference to the use of chromosomal abnormalities in "patients," suffering from Down Syndrome is a result of the fact that the data used to generate the control profile is obtained from the amniotic fluid of fetuses who have been born and conclusively diagnosed later as "patients" with Down Syndrome. This terminology is used in ordinary medical practice and in the present specification because this data, while based on amniotic fluid samples taken from a number of fetuses, is confirmed and assigned to a profile group by a post-partum diagnosis, and this diagnosis is part of developing the appropriate control profile. As with any diagnostic technique, the control values must be compared to a suspect specimen and reproducible separation between the two established to validate the technique. That was done here. Once established, the control profile is used to compare the amniotic fluid specimen obtained from the womb and the practice of the method of the invention is performed. The method is, therefore, a diagnosis of chromosomal abnormalities in the fetus to diagnose Down Syndrome, and a previously developed profile from control patients is used. To avoid any confusion on this point, claims 15 and 21 are amended to clarify the nature of the diagnosis being performed. Applicant submits that the amendment renders the claims in compliance with § 112

through deletion of the "patient profile" language and clarification of the method of the present invention.

With regard to the use of the term "patient" in the specification, this use is ordinary practice in the field when referring to data obtained from amniotic fluid, even though a subsequent diagnosis may be made post-partum. The specification provides data obtained from the amniotic fluid of a fetus and ultimately used in comparison with a profile of metabolite concentrations that are similarly obtained, but whose diagnosis, i.e., assignment to either a control or Down Syndrome population is achieved by post-partum testing. Applicant has extensive data that could be provided by declaratory evidence that the amniotic fluid obtained from a fetus may be used in comparison with a profile of control group, i.e., healthy babies, to diagnose Down Syndrome. Furthermore, Applicant is readily capable of providing declaratory data that is ordinary practice of those skilled in the art to use the term "patient" to describe data obtained in this manner and used in this manner as the basis for analysis of a future specimen. Thus, the example in the specification is an exemplification of the claimed method and does not refer merely to the generation of profiles of patients, but to the diagnosis of Down Syndrome from the amniotic fluid of the fetus.

II. The Amended Claims Clarify the Use of the Amniotic Fluid Specimen and the Analysis of Metabolite Quantities and are Sufficiently Definite to Satisfy the Requirements of § 112, 2nd ¶ to Particularly Point Out and Distinctly Claim the Subject Matter of the Invention.

The phrase that the Examiner objected to under 35 USC § 112, 2nd ¶:

> "comparing the patient profile with the control profile representative of normal levels of each metabolite, wherein the control profile lists a quantity for each respective metabolite of the patient profile that is present in amniotic fluid of persons with Down Syndrome"

has been revised to avoid the indefiniteness perceived by the Examiner. Specifically, the amended claim recites the use of the profile of the amniotic fluid specimen in comparison with the control profile to diagnose the presence of Down Syndrome.

Second, the phrase "representative of normal levels" is removed as the basis to describe how the metabolite quantities in the control profile are used in comparison with the metabolite quantities in the amniotic fluid specimen. The amended claims specify precisely the nature of the control profile and how it is compared, i.e., by comparing quantities of individual analytes in order to make the claimed diagnosis. Finally, the objection to the phrase "a quantity of a subset of metabolites" has been amended to specify that the method of the invention compares a pattern of analyte concentrations from the amniotic fluid taken from around a fetus, to the control profile. The analysis of a pattern of metabolite quantities is exemplified by the comparison of the sample to the control profile as conducted in the Example of the specification.

The objection to the phrase "amniotic fluid of a patient known to have Down Syndrome" under § 112, 2nd ¶, is traversed by revising that language to simply indicate that the identification of the presence of Down Syndrome is achieved by comparing the pattern of metabolite concentration to an abnormal concentration profile and making the diagnosis on that basis.

CONCLUSION

Applicant notes absence of prior art rejections of the presently claimed method, and submits that the foregoing amendments and comments render the application in condition for allowance and respectfully requests such action accordingly.

By entry of this Amendment, Applicant respectfully submits that all of the Examiner's rejections have been overcome. Additionally, the Examiner is invited to telephone the undersigned representative if the Examiner believes that a telephonic interview would advance this case to allowance.

Respectfully submitted,

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